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10/772,430	02/06/2004	Yohei Makuta	0505-1266P	6116

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EXAMINER

LEE, BENJAMIN WILLIAM

ART UNIT	PAPER NUMBER
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3714

NOTIFICATION DATE	DELIVERY MODE
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06/25/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/772,430

Applicant(s)

MAKUTA ET AL.

Examiner

Benjamin W. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :02/06/2004;
08/31/2005; 11/16/2005.

DETAILED ACTION

Claim Objections

1. Claims 4 and 12 is objected to because of the following informalities:
 - “an” in claim 4, line 2 should be --a--
 - Claim 12 is dependent on claim 1 but the language of the claim (“click generating means”) suggests that claim 12 should be dependent on claim 11. Claim 12 has been treated as dependent on claim 11 for this Office Action.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

A single means claim (a claim where a means recitation does not appear in combination with another recited element of means) is subject to an undue breadth rejection. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983).

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Claim 11 recites a single means (i.e. click generating means). It is noted that in the specification the click generating means is the structure identified by reference number 150 in Figs. 14-17 (the spring-loaded steel ball passing over the hole portion), and the scope of the claimed click generating means (the only means in the claim) covers every conceivable structure for achieving the stated property (generating a click feeling similar to a gear change in an actual motorcycle when a gear change is made by operating the gear change pedal). Thus, the claim is held non-enabling since the specification discloses at most only those structures known to the inventor.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamasaki et al. (US 5,547,382, hereinafter Yamasaki).

Re claim 7: Yamasaki discloses a riding simulation system comprising a vibrator 175e for dummy engine vibration in a steering handle mechanism and providing an operator with a pseudo-experience of a running condition of a motorcycle by generating a vibration based on the operating condition by the operator (see Fig. 36; col. 17, lines 22-37),

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wherein the vibrator is inserted and held in the inside of one end portion of a steering handle pipe constituting the steering handle mechanism (see Fig. 36; col. 17, lines 22-37), and a predetermined gap is formed between an outer circumferential portion of the one end portion of the steering handle pipe and a steering handle grip attached to the outer circumferential portion (the gap is formed by the switch case 175l, see Fig. 36; col. 17, lines 35-37).

Re claim 8: The teachings of Yamasaki as applied to claim 7 above have been discussed. Yamasaki further discloses the steering handle grip is a throttle grip 175m (see Fig. 36; col. 17, lines 35-37).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,083,106) in view of Yamasaki.

Re claim 1: The limitation "support means for..." in lines 11-12 invokes 35 U.S.C. 112, sixth paragraph.

McDowell discloses a riding simulation system for providing an operator with a pseudo-experience of running conditions of a car by displaying scenery seen to the driver as a video image on a display based on the operating condition of operation by the operator (see abstract), the riding simulation system comprising:

a steering handle mechanism/steering wheel input device 28 gripped and operated by the operator (see Fig. 1; col. 5, lines 50-67);

a step mechanism comprising two pedals, which are operated by the feet of the operator, (see Figs. 1 and 2; col. 6, lines 28-39);

a connection shaft/upper telescopic portion 25 and lower telescopic portion 26 for connecting the steering handle mechanism and the step mechanism to each other, the connection shaft provided to be extendable and contractible (i.e. telescopic) along the axial direction thereof (see col. 6, lines 7-22); and

support means for supporting the steering handle mechanism or the connection shaft (steering wheel base portion 29, see Fig. 1; col. 5, lines 50-67).

However, McDowell fails to explicitly disclose that the riding simulation system is used to simulate motorcycles and that the pedals are used as a brake pedal and a gear change pedal.

Yamasaki discloses a riding simulation system for motorcycles featuring two pedals used as a brake pedal and a gear change pedal similar to an actual motorcycle (see Fig. 33; col. 6, lines 14-29; col. 16, lines 45-61). Furthermore, the examiner notes that although the claim is directed toward simulating a motorcycle, the structures recited in McDowell anticipate the structures recited in the claim. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). See MPEP § 2114.

Therefore, in view of Yamasaki, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the pedals of McDowell as a brake and gear change pedal in order to simulate the operation of motorcycle.

Re claim 2: The teachings of McDowell as modified by Yamasaki as applied to claim 1 above have been discussed. McDowell further discloses the connection shaft is provided to be inclinable relative to the steering handle mechanism or the step mechanism. Support brace 32 is telescopically extendable (see Fig. 1; col. 6, lines 1-6)

Re claim 3: The teachings of McDowell as modified by Yamasaki as applied to claim 1 above have been discussed. Yamasaki further discloses a vibrator for a dummy engine vibration (see col. 17, lines 22-27). Therefore, in view of Yamasaki, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to add the vibration motor to the system of McDowell in order to simulate engine vibration.

Re claim 4: The limitation “ means for giving a reaction force in a direction opposite to a turning direction of said steering handle mechanism” in lines 2-3 invokes 35 U.S.C. 112, sixth paragraph.

The teachings of McDowell as modified by Yamasaki as applied to claim 1 above have been discussed. Yamasaki further discloses a handle moving motor 121a that provides a reaction force direction opposite turning in order to simulate the actual feel of steering (see Fig. 28; col. 14, lines 55-65). Therefore, in view of Yamasaki, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the handle moving motor to the system of McDowell in order to simulate the feel of steering.

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki in view of Semenik et al. (US 6,133,657).

Re claim 5: Yamasaki discloses a riding simulation system for providing an operator with a pseudo-experience of a running condition of a motorcycle by generating a vibration based on the operating condition by the operator, the riding system comprising a vibrator 175e for a dummy engine vibration in a steering handle mechanism (see Fig. 36; col. 17, lines 22-37).

However, Yamasaki fails to explicitly disclose a tapered bracket inserted into a taper surface portion in the steering handle pipe.

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Semenik discloses a bracket for holding a vibrator (see Figs. 2 and 4; abstract).

Therefore, in view of Semenik, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the vibrator in a bracket in order to hold the vibrator in place.

However, the system of Yamasaki as modified by Semenik does not disclose a taper-shaped bracket. Applicant has not disclosed that placing the vibrator in a taper-shaped bracket fitting in a taper surface portion in the steering handle pipe solves any stated problem or is for any particular purpose. Moreover, it appears that the bracket of Semenik performs equally well as the taper-shaped bracket of the applicant's invention.

Accordingly, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Yamasaki as modified by Semenik to have a tapered bracket holding the vibrator in a taper surface portion in the steering handle pipe because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the system of Yamasaki as modified by Semenik.

Re claim 6: Yamasaki discloses a riding simulation system comprising a vibrator for a dummy engine vibration in a steering handle mechanism and providing an operator with a pseudo-experience of a running condition of a motorcycle by generating a vibration based on the operating condition by the operator (see Fig. 36; col. 17, lines 22-37). The vibrator is engaged with an end portion of the steering handle pipe (see Fig. 36; col. 17, lines 22-37).

However, Yamasaki fails to explicitly disclose the vibrator is held in place in the steering handle pipe by a bracket and the bracket is screw engaged with an end portion of the steering handle pipe.

Semenik discloses a bracket for holding a vibrator (see Figs. 2 and 4; abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made mount the vibrator in a bracket in order to hold the vibrator in place.

However, the system of Yamasaki as modified by Semenik does not disclose the bracket is held in place by a screw or screws.

Official Notice is taken that both the concept and advantages of mounting a bracket with a screw was well known and expected in the art at the time the invention was made. Various types of brackets a held in place with screws in order to prevent the bracket, and thus the device held in the bracket, from moving.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to secure the vibrator bracket of the system of Yamasaki as modified by Semenik with a screw or screws in order to secure the bracket and vibrator in place.

10. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki in view of Clarkson (US 6,122,991).

The teachings of Yamasaki as applied to claims 7 and 8 above have been discussed.

However, Yamasaki fails to disclose the steering handle pipe is comprised of a single pipe communicating one end portion, on which the throttle grip is mounted, and the other end portion to each other.

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Clarkson teaches a single pipe handlebar for vehicles (see Fig. 1).

Therefore, in view of Clarkson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the handlebars of Yamasaki with the single pipe handlebars of Clarkson in order to simulate a vehicle which features single pipe handlebars.

11. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki in view Schneider (US 4,727,765).

Re claim 11: The limitation "click generating means for..." in lines 6-8 invokes 35 U.S.C. 112, sixth paragraph.

Yamasaki disclose a riding simulation system for providing an operator with a pseudo-experience of running conditions of a motorcycle by displaying scenery seen to the rider as a video image on a display based on an operating condition upon an operation by the operator (see Fig. 1; col. 6, lines 30-52) and detecting a gear change by a sensor provided at a gear change pedal (see Fig. 33; col. 16, lines 45-61). Yamasaki further discloses that the gear change feeling in an actual two-wheeled vehicle is simulated (see col. 16, lines 58-61).

However, Yamasaki fails to explicitly disclose a click generating means for generating a click feeling similar to a gear change in an actual motorcycle when a gear change is made by operating the gear change pedal.

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Schneider discloses a shift mechanism for a manual transmission. The shift mechanism features a spring-loaded ball catch (see Figs. 1 and 2) which acts as a click generating means for generating a click feeling in an actual manual transmission.

Therefore, in view of Schneider, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a spring-loaded ball catch to the gear change pedal of Yamasaki in order to more accurately simulate the feeling of a gear change by using actual parts which may be used in a manual transmission for a vehicle.

Re claim 12: The limitation “click generating means” in lines 1-2 does not invoke 35 U.S.C. 112, sixth paragraph because “click generating means” are modified by sufficient structure. See MPEP § 2181.

The teachings of Yamasaki as modified by Schneider as applied to claim 11 above have been discussed. Schneider further discloses the click generating means comprises a ball member 13, and a hole portion/hub 3 with catch recesses 14, 15, and 16 in which the ball member is engaged when the gear change pedal is in a center position, and, when a gear change is made by operating the gear change pedal, the ball member is released from the hole portion and thereafter engaged in the hole portion, whereby a click sound and a vibration are generated (see col. 3, lines 8-21).

12. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki in view of Tosaki et al. (US 5,989,123, hereinafter Tosaki).

Re claim 13: Yamasaki discloses a riding simulation system for providing an operator with a pseudo-experience of running conditions of a motorcycle by displaying scenery seen to the rider as a video image on a display based on an operating condition of a dummy operating mechanism operated by the operator (see Fig. 1; col. 6, lines 30-52), the riding simulation system comprising a handle mechanism for operating a steering handle with a handle shaft portion as a turning fulcrum by the operator (see Fig. 36) and a frame portion for supporting the steering handle shaft portion (see Figs. 25-27; col. 13, line 66 - col. 14, line 9). Yamasaki further discloses a handle moving motor 121a that provides a reaction force direction opposite turning in order to simulate the actual feel of steering (see Fig. 28; col. 14, lines 55-65).

However, Yamasaki fails to disclose a single spring for giving reaction force in a direction opposite to the turning direction of the steering handle when the steering handle is operated, wherein the single spring is provided with a pair of clamping portions projected outwards from the steering handle shaft portion so as to clamp the frame portion therebetween.

Tosaki discloses a steering wheel control apparatus for a television game machine. The steering wheel control apparatus features a centering mechanism which provides a reaction force in the direction opposite the turning direction (see col. 19, lines 39-45). The centering mechanism is a single torsion spring 52 (see Figs. 16 and 17; col. 19, lines 56-65), wherein the single spring is provided with a pair of clamping portions 52a and 52b projected outwards from the steering handle shaft portion so as to clamp the frame portion/engagement cylinder 31 therebetween (see Figs. 16 and 17; col. 19, lines 56-65).

Therefore, in view of Tosaki, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the handle moving motor of Yamasaki with the centering mechanism of Tosaki in order to reduce the cost of parts in the system of Yamasaki.

Re claim 14: The teachings of Yamasaki as modified by Tosaki as applied to claim 13 above have been discussed.

However, the teachings of Yamasaki as modified by Tosaki fail to disclose elastic members interposed between the pair of clamping portions of the spring and the frame.

Official Notice is taken that both the concepts and advantages of placing damping material (elastic members) between mechanical points of contact was well known and expected in the art at the time the invention was made. Placing damping material, such as rubber, between points of mechanical contact reduces the sound and vibrations caused by the impact of two hard surfaces.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place elastic members (damping material) interposed between the pair of clamping portions of the spring and the frame in order to reduce the noise caused by the impact of the clamping portions of the spring and the frame.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoki et al. disclose a riding simulation system. Liebelt discloses a tactile device placed in the end of handlebars.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin W. Lee whose telephone number is 571-270-1346. The examiner can normally be reached on Mon - Fri (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BWL

Benjamin W. Lee
June 15, 2007

Kathleen Mosser
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Primary Examiner
Art Unit 3714